

CLAIM AMENDMENTS

1 1 (currently amended): A method using a pull cord operatively connected to a
2 rotatable shaft to reversibly rotate the shaft, the method comprising the steps:

3 ~~providing first and second rotatable shafts; pull cord means for rotating the first~~
4 ~~shaft in a selected direction when the pull cord means is pulled; means for retracting the pull~~
5 ~~cord means; means for converting rotation of the first shaft in the selected direction into~~
6 ~~rotation of the second shaft, said converting means being settable in first and second~~
7 ~~conditions for respectively converting rotation of the first shaft in the selected direction into~~
8 ~~rotation of the second shaft in first and second opposite directions; and means operatively~~
9 ~~connected to the converting means and responsive to pulling movement of the pull cord~~
10 ~~means in first and second directions for selectively setting the converting means in the first~~
11 ~~and second conditions as the cord means is pulled;~~

12 (a) ~~pulling the pull cord means in the~~ a pull cord in a first direction, thereby
13 ~~rotating the shaft in the~~ a first shaft in a selected direction and converting rotation of the first
14 ~~shaft into rotation of a second shaft in a first direction;~~

15 (b) retracting the pull cord means; and

16 (c) ~~pulling the pull cord means in the~~ in a second direction, thereby rotating
17 ~~the shaft in the~~ first shaft in the selected direction and converting rotation of the first shaft
18 ~~into rotation of the second shaft in a second direction; opposite the first direction.~~

1 2 (currently amended): A method using a pull cord operatively connected to a
2 rotatable shaft having a load attached thereto to selectively rotate the shaft in opposite
3 directions and thereby position the load, the method comprising the steps:

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4 providing first and second rotatable shafts; ~~pull cord means for rotating the first~~
5 ~~shaft in a selected direction when the pull cord means is pulled; means for retracting the pull~~
6 ~~cord means; means for converting rotation of the first shaft in the selected direction into~~
7 ~~rotation of the second shaft, said converting means being settable in first and second~~
8 ~~conditions for respectively converting rotation of the first shaft in the selected direction into~~
9 ~~rotation of the second shaft in first and second opposite directions; and means responsive to~~
10 ~~pulling movement of the pull cord means in first and second directions for selectively setting~~
11 ~~the converting means in the first and second conditions as the pull cord means is pulled;~~

12 (a) ~~pulling the pull cord means~~ a pull cord in a direction selected from the first
13 first and second, different pull directions, thereby rotating the shaft in a direction selected
14 from the a first shaft in a selected direction and converting rotation of the first shaft in the
15 selected direction into rotation of a second shaft in a direction selected from first and second,
16 opposite directions of rotation, the first and second directions of rotation being selected by
17 the first and second pull directions, respectively;

18 (b) ~~returning the pull cord means~~ pull cord; and

19 (c) ~~repeating steps (a) and (b) as required to move the load to a selected~~
20 ~~position.~~

1 3 (currently amended): A reversible pull cord mechanism, comprising:

2 first and second rotatable shafts;

3 pull cord means operatively connected to the first shaft and to the second shaft
4 and including a pull cord for rotating the first shaft in a selected direction when the ~~pull cord~~
5 ~~means~~ pull cord is pulled;

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6 means operatively connected to the pull cord means and responsive to pulling
7 the pull cord ~~pull cord means~~ in different directions for rotating the first shaft in a selected
8 direction; and

9 means operatively connected to the first shaft and to the second shaft and
10 responsive to pulling the pull cord in two of said different directions for converting rotation
11 of the first shaft in the selected direction into rotation of the second shaft in two opposite
12 directions.

1 4 (currently amended): A reversible pull cord mechanism, comprising:

2 first and second rotatable shafts;

3 pull cord means including a pull cord and operatively connected to the first
4 shaft for rotating the first shaft in a selected direction when the ~~pull cord means~~ pull cord is
5 pulled;

6 means for retracting the ~~pull cord means~~ pull cord;

7 means for converting rotation of the first shaft in the selected direction into
8 rotation of the second shaft, said converting means being settable in first and second
9 conditions for ~~respectively~~ converting rotation of the first shaft in the selected direction into
10 rotation of the second shaft in first and second directions, respectively ; and

11 means responsive to pulling movement of the ~~pull cord means~~ pull cord in first
12 and second directions for selectively setting the converting means in the first and second
13 conditions, respectively, as the ~~cord means~~ pull cord is pulled.

1 5 (currently amended): A reversible pull cord mechanism, comprising:

2 a retractable pull cord mechanism comprising: a first rotatable shaft; a pulley
3 operatively connected to the first rotatable shaft for rotating the first rotatable shaft; pull cord

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4 means including a pull cord wrapped around the pulley for rotating the pulley and the first
5 rotatable shaft when the ~~cord means~~ pull cord is pulled away from the pulley; and means
6 operatively connected to the first rotatable shaft for rewinding the ~~cord means~~ pull cord
7 when the ~~cord means~~ pull cord is released;

8 a second rotatable shaft operatively connected to the first rotatable shaft for
9 rotating the second rotatable shaft when the first rotatable shaft rotates;

10 shifting means adapted for positioning in first and second positions for
11 converting single direction rotation of the first rotatable shaft into rotation of the second
12 rotatable shaft in first and second directions; and

13 connecting means connecting the pull cord means to the shifting means for
14 setting the shifting means in said first and second positions in response to the ~~pull cord means~~
15 pull cord being pulled in first and second directions.

1 6 (currently amended): A reversible rotation pull cord mechanism, comprising:

2 a retractable pull cord mechanism, comprising: a first rotatable shaft; a pulley
3 operatively connected to the first rotatable shaft for rotating the first rotatable shaft; pull cord
4 means, including a pull cord wrapped around the pulley for rotating the pulley and the first
5 rotatable shaft when the ~~cord means~~ pull cord is pulled away from the pulley; and rewind
6 means operatively connected to the first rotatable shaft for rewinding the ~~cord means~~ pull
7 cord when the ~~cord means~~ pull cord is released;

8 a transmission ~~mechanism~~ including a second rotatable shaft operatively
9 connected to the first rotatable shaft for rotating the second shaft when the first shaft rotates;
10 the transmission means further comprising shifting means adapted for being positioned in at
11 least first and second positions for converting single direction rotation of the first rotatable
12 shaft into rotation of the second rotatable shaft in first and second directions; and

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13 connecting means connecting the pull cord means to the shifting means for setting the
14 transmission ~~mechanism~~ in said first and second positions in response to the ~~pull cord means~~
15 pull cord being pulled in first and second directions.

1 7 (currently amended): The reversible pull cord mechanism of claim 6, wherein:
2 the transmission ~~mechanism~~ comprises: a first gear operatively mounted on the
3 first rotatable shaft for rotating therewith in a first direction; a second gear meshed with the
4 first gear for rotating in a second direction, opposite the first direction; and a third, output
5 gear; and wherein

6 the shifting means comprises fourth and fifth gears; a movable shaft mounting
7 the fourth and fifth gears at spaced apart locations along said movable shaft with the fifth
8 gear maintained meshed with the third, output gear; said movable shaft being mounted for
9 arcuate movement between said first position, at which the fourth gear meshes with the first
10 gear for rotating the fifth gear with the first gear and said second position, at which the fourth
11 gear meshes with the second gear for rotating the fifth gear with the second gear; and
12 wherein

13 said connecting means operatively connects the pull cord means to said
14 movable shaft for moving said movable shaft to the said first and second positions.

1 8 (original): The reversible pull cord mechanism of claim 7, said connecting means
2 further comprising: first spring means comprising a first arm or section mounted proximate
3 the shifting means for rotating movement; a second arm or section mounted proximate one
4 end to and extending from the first arm and mounted proximate a second end to the movable
5 shaft of the shifting means for moving the movable shaft between and to said first and second
6 positions upon rotation of the first arm; and a third arm mounted to and extending from the

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7 first arm for rotating the first arm, thereby pivoting the second arm and moving the movable
8 shaft between and to said first and second positions.

1 9 (currently amended): The reversible rotation pull cord mechanism of claim 6,
2 wherein

3 the transmission ~~mechanism~~ comprises: a first gear operatively mounted on the
4 first rotatable shaft for rotating therewith in a first direction; a second gear meshed with the
5 first gear for rotating in a second direction, opposite the first direction; and a third, output
6 gear; and wherein

7 the shifting means of the transmission ~~means~~ comprises fourth and fifth gears;
8 a movable shaft mounting the fourth and fifth gears at spaced apart locations along said
9 movable shaft with the fifth gear maintained meshed with the third, output gear; said
10 movable shaft being mounted for arcuate movement among and to said first position, in
11 which the fourth gear meshes with the first gear for rotating the fifth gear with the first gear,
12 said second position, in which the fourth gear meshes with the second gear for rotating the
13 fifth gear with the second gear, and a third, neutral position between said first and second
14 positions at which the fourth gear is disengaged from the first and second gears; and wherein

15 said connecting means operatively connects the pull cord means to said
16 movable shaft for moving said movable shaft among and to said first, second and third
17 positions.

1 10 (currently amended): The reversible pull cord mechanism of claim 9, said
2 connecting means further comprising:

3 first spring means comprising a first arm or section mounted proximate the
4 shifting means for rotating movement; a second arm or section mounted proximate one end

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to and extending from the first arm and mounted proximate a second end to the movable shaft of the shifting means for moving the movable shaft among and to said three positions upon rotation of the first arm; and a third arm mounted to and extending from the first arm for rotating the first arm, thereby pivoting the second arm and moving the movable shaft among and to said three positions; and the third arm having an aperture therein receiving the pull cord in sliding engagement such that pulling the pull cord in first and second directions moves the movable shaft to said first and second positions; and

second spring means mounted proximate the first spring means and having a detent positioned such that when the pull cord is released, the detent releasably engages the first spring means and positions the first spring means in said neutral third position, and disengages from the first spring when the pull cord is pulled in the first or second direction.

11 (currently amended): A pull cord-operated retractable cover system, comprising:

(1) a cover system comprising: a housing; a plurality of rotatable pulleys mounted on or to the housing; a cover; cords wound around the pulleys and connected to the cover for extending the cover from the housing and retracting the cover to the housing; and

(2) a reversible pull cord mechanism, comprising:

(a) retractable pull cord means comprising: a first rotatable shaft; a pulley operatively connected to the first rotatable shaft for rotating the first rotatable shaft; ~~cord means~~ a pull cord wrapped around the pulley for rotating the pulley and the first rotatable shaft when the ~~cord means~~ pull cord is pulled away from the pulley; and means operatively connected to the first rotatable shaft for rewinding the ~~cord means~~ pull cord when the ~~cord means~~ pull cord is released;

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14 (b) a transmission ~~mechanism~~ including a second rotatable shaft and
15 being operatively connected to the first rotatable shaft for rotating the second
16 rotatable shaft when the first rotatable shaft rotates; the transmission ~~means~~
17 further comprising shifting means adapted for positioning in first and second
18 positions for converting single direction rotation of the first rotatable shaft into
19 rotation of the second rotatable shaft in first and second directions; and

20 (c) means connecting the pull cord means to the shifting means and
21 setting the transmission ~~mechanism~~ in said first and second positions in
22 response to the ~~pull cord means~~ pull cord being pulled in first and second
23 directions.

1 12 (currently amended): The cover system of claim 11, wherein:

2 the transmission ~~mechanism~~ comprises: a first gear operatively mounted on the
3 first rotatable shaft for rotating therewith in a first direction; a second gear meshed with the
4 first gear for rotating in a second direction, opposite the first direction; a third, output gear;
5 and wherein:

6 the shifting means of the transmission ~~means~~ comprises fourth and fifth gears;
7 a movable shaft mounting the fourth and fifth gears at spaced apart locations along said
8 movable shaft with the fifth gear maintained meshed with the third, output gear; said
9 movable shaft being mounted for arcuate movement between said first position, in which the
10 fourth gear meshes with the first gear for rotating the fifth gear with the first gear and said
11 second position, in which the fourth gear meshes with the second gear for rotating the fifth
12 gear with the second gear; and wherein:

13 said connecting means operatively connects the pull cord means to said
14 movable shaft for moving said movable shaft to said first and second positions.

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1 13 (original): The cover system of claim 12, said connecting means further
2 comprising first spring means comprising a first arm or section mounted proximate the
3 shifting means for rotating movement; a second arm or section mounted proximate one end
4 to and extending from the first arm and mounted proximate a second end to said movable
5 shaft of the shifting means for moving said movable shaft between and to said first and
6 second positions upon rotation of the first arm; and a third arm mounted to and extending
7 from the first arm for rotating the first arm, thereby pivoting the second arm and moving the
8 movable shaft between and to said two positions.

1 14 (currently amended): The cover system of claim 11, wherein:
2 the transmission ~~mechanism~~ comprises: a first gear operatively mounted on the
3 first rotatable shaft for rotating therewith in a first direction; a second gear meshed with the
4 first gear for rotating in a second direction, opposite the first direction; and a third, output
5 gear; and wherein:

6 the shifting means of the transmission ~~means~~ comprises fourth and fifth gears;
7 a movable shaft mounting the fourth and fifth gears at spaced apart locations along said
8 movable shaft with the fifth gear maintained meshed with the third, output gear; said
9 movable shaft being mounted for arcuate movement among and to said first position, in
10 which the fourth gear meshes with the first gear for rotating the fifth gear with the first gear,
11 said second position, in which the fourth gear meshes with the second gear for rotating the
12 fifth gear with the second gear, and a third, neutral position between said first and second
13 positions in which the fourth gear is disengaged from the first and second gears; and wherein:

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14 said connecting means operatively connects the pull cord means to said
15 movable shaft for moving the movable shaft among and to said first, second and third
16 positions.

1 15 (currently amended): The cover system of claim 14, said connecting further
2 comprising:

3 first spring means comprising a first arm or section mounted proximate the
4 shifting means for rotating movement; a second arm or section mounted proximate one end
5 to and extending from the first arm and mounted proximate a second end to the movable
6 shaft of the shifting means for moving the movable shaft among and to said three positions
7 upon rotation of the first arm; and a third arm mounted to and extending from the first arm
8 for rotating the first arm, thereby pivoting the second arm and moving said movable shaft
9 among and to said three positions; and the third arm having an aperture therein receiving the
10 pull cord in sliding engagement such that pulling the pull cord in first and second directions
11 moves said movable shaft to said first and second positions; and

12 second spring means mounted proximate the first spring means and having a
13 detent positioned such that when the pull cord is released, the detent releasably engages the
14 first spring means and positions the first spring means in said neutral third position, and
15 disengages from the first spring when the pull cord is pulled in the first or second direction.